

Claims

- [c1] 1. A method for adjusting images, suitable for adjusting a video device with a voice-assisted system, said video device providing an on-screen display function, said method comprising:
- receiving a voice command;
 - recognizing said voice command and outputting a voice signal based on a result of recognizing said voice command; and
 - identifying said voice command as one of a specific command and a fuzzy command based on said voice signal.
- [c2] 2.The method of claim 1, if said voice command is said specific command, further comprising performing one adjustment action corresponding to said voice command.
- [c3] 3.The method of claim 1, if said voice command is said fuzzy command, further comprising performing a plurality of adjustment actions corresponding to said voice command.
- [c4] 4. The method of claim 1, before said identifying step,

further comprising: performing a confidence measure of said voice signal, outputting an estimation level based on said confidence measure, and comparing said estimation level with a predetermined estimation threshold.

[c5] 5. The method of claim 4, wherein said comparing step includes:
if said estimation level is higher than said predetermined estimation threshold, directly going to said step of identifying said voice command as a specific command or a fuzzy command based on said voice signal;
if said estimation level is lower than said predetermined estimation threshold, displaying a plurality of commands based on said voice signal, a similarity of said plurality of commands to said voice command is higher than a predetermined value, selecting one of said plurality of commands, and going to said step of identifying said voice command as one of said specific command and said fuzzy command based on said voice signal.

[c6] 6. The method of claim 5, wherein said step of selecting one of said plurality of commands includes selecting one of said plurality of commands by a voice input.

[c7] 7. The method of claim 5, wherein said step of selecting one of said plurality of commands includes selecting one of said plurality of commands by a button input from

said video device.

- [c8] 8.The method of claim 1, if said voice command is said fuzzy command, further comprising finding said plurality of adjustment actions corresponding to said voice command from a command database.
- [c9] 9.The method of claim 1, if said voice command is said fuzzy command, further comprising displaying performed adjustment actions corresponding to said voice command via said on-screen display function.
- [c10] 10. The method of claim 9, after said step of displaying said performed adjustment actions corresponding to said voice command via said on-screen display function, further comprising an image modification process.
- [c11] 11. The method of claim 10, wherein said image modification process includes selection by a voice input.
- [c12] 12.The method of claim 10, wherein said image modification process includes selection by a button input.
- [c13] 13. A video device with a voice-assisted system, comprising:
a voice recognition engine receiving a voice command and outputting a voice signal based on said voice command;

an on-screen display control interface, coupled to said voice recognition engine, receiving said voice signal;
a display control unit coupled to said on-screen display control interface; and
a display unit coupled to said display control unit, said on-screen display control interface based on said voice signal identifying said voice command as one of a specific command and a fuzzy command.

[c14] 14. The device of claim 13, wherein if said voice command is said specific command, said display control unit performs an adjustment action corresponding to said voice command to adjust an image displayed on said display unit.

[c15] 15. The device of claim 13, wherein if said voice command is said fuzzy command, said display control unit performs a plurality of adjustment actions corresponding to said voice command to adjust said image displayed on said display unit.

[c16] 16. The device of claim 13, further comprising a confidence measure unit performing a confidence measure of said voice signal, outputting an estimation level based on said confidence measure, and comparing said estimation level with a predetermined estimation threshold.

[c17] 17. The device of claim 16, wherein when comparing said estimation level with said predetermined estimation threshold,
if said estimation level is higher than said predetermined estimation threshold, said on-screen display control interface directly identifies said voice command as one of a specific command and a fuzzy command based on said voice signal;
if said estimation level is lower than said predetermined estimation threshold, said on-screen display control interface displays a plurality of commands based on said voice signal, a similarity of said plurality of commands to said voice command is higher than a predetermined value, said on-screen display control interface selects one of said plurality of commands, and said on-screen display control interface identifies said voice command as one of said specific command and said fuzzy command based on said voice signal.

[c18] 18. The device of claim 17, wherein said on-screen display control interface selects one of said plurality of commands, said similarity of said plurality of commands to said voice command is higher than a predetermined value, via a voice input through said voice recognition engine.

- [c19] 19. The device of claim 17, wherein said on-screen display control interface selects one of said plurality of commands, said similarity of said plurality of commands to said voice command is higher than a predetermined value, via a button input of said video device.
- [c20] 20. The device of claim 16, wherein said confidence measure unit is disposed on said on-screen display control interface.
- [c21] 21. The device of claim 13, wherein if said voice command is said fuzzy command, said voice recognition engine finds said plurality of adjustment actions corresponding to said voice command from a command database.
- [c22] 22. The device of claim 13, if said voice command is said fuzzy command, said display control unit displays performed adjustment actions corresponding to said voice command via said on-screen display function.
- [c23] 23. The device of claim 22, wherein after displaying said performed adjustment actions corresponding to said voice command via said on-screen display function, said on-screen display control interface performs an image modification process.
- [c24] 24. The device of claim 23, wherein said image modifica-

tion process includes said voice recognition engine selecting via a voice input.

[c25] 25.The device of claim 23, wherein said image modification process includes selection by a button input from said video device.

[c26] 26.A video device with a voice-assisted system, comprising:
a voice recognition engine receiving and recognizing a voice command and outputting a recognition result, said voice recognition engine including a confidence measure unit performing a confidence measure of said voice signal, outputting an estimation level based on said confidence measure, comparing said estimation level with a predetermined estimation threshold to output a voice signal;
an on-screen display control interface, coupled to said voice recognition engine, receiving said voice signal;
a display control unit coupled to said on-screen display control interface; and
a display unit coupled to said display control unit, said on-screen display control interface based on said voice signal identifying said voice command as one of a specific command and a fuzzy command, if said voice command is said specific command, said display control unit performing an adjustment action corresponding to said

voice command to adjust an image displayed on said display unit, if said voice command is said fuzzy command, said display control unit performing a plurality of adjustment actions corresponding to said voice command to adjust said image displayed on said display unit.

- [c27] 27. The device of claim 26, wherein when comparing said estimation level with said predetermined estimation threshold
- if said estimation level is higher than said predetermined estimation threshold, said on-screen display control interface directly identifies said voice command as one of a specific command and a fuzzy command based on said voice signal;
 - if said estimation level is lower than said predetermined estimation threshold, said on-screen display control interface displays a plurality of commands based on said voice signal, a similarity of said plurality of commands to said voice command is higher than a predetermined value, said on-screen display control interface selects one of said plurality of commands, and said on-screen display control interface identifies said voice command as one of said specific command and said fuzzy command based on said voice signal.

- [c28] 28. The device of claim 27, wherein said on-screen display control interface selects one of said plurality of commands, said similarity of said plurality of commands to said voice command is higher than a predetermined value, via a voice input through said voice recognition engine.
- [c29] 29. The device of claim 27, wherein said on-screen display control interface selects one of said plurality of commands, said similarity of said plurality of commands to said voice command is higher than a predetermined value, via a button input of said video device.
- [c30] 30. The device of claim 26, wherein if said voice command is said fuzzy command, said voice recognition engine finds said plurality of adjustment actions corresponding to said voice command from a command database.
- [c31] 31. The device of claim 26, if said voice command is said fuzzy command, said display control unit displays performed adjustment actions among said plurality of adjustment actions corresponding to said voice command via said on-screen display function.
- [c32] 32. The device of claim 31, wherein after displaying said performed adjustment actions said plurality of adjust-

ment actions corresponding to said voice command via said on-screen display function, said on-screen display control interface performs an image modification process.

[c33] 33. The device of claim 32, wherein said image modification process includes said voice recognition engine selecting via a voice input.

[c34] 34. The device of claim 32, wherein said image modification process includes selection by a button input from said video device.